



PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷: C07K 14/00	A2	(11) International Publication Number: WO 00/26240 (43) International Publication Date: 11 May 2000 (11.05.00)
(21) International Application Number: PCT/GB99/03631 (22) International Filing Date: 2 November 1999 (02.11.99) (30) Priority Data: 9823975.9 2 November 1998 (02.11.98) GB (71) Applicant (for all designated States except US): ACTINOVA LIMITED [GB/GB]; 5 Signet Court, Swanns Road, Cambridge CB5 8LA (GB). (72) Inventors; and (75) Inventors/Applicants (for US only): BJORCK, Lars, Henrik [SE/SE]; Magle Stora Kyrkogata 10, S-223 50 Lund (SE). RASMUSSEN, Magnus [SE/SE]; Bryggaregatan 22C, S-227 36 Lund (SE). (74) Agent: WOODS, Geoffrey, Corlett; J.A. Kemp & Co., 14 South Square, Gray's Inn, London WC1R 5LX (GB).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>Without international search report and to be republished upon receipt of that report.</i>
(54) Title: PROTEIN (57) Abstract A protein is described which is capable of binding to α_2 macro globulin. The protein comprises the amino acid sequence of SEQ ID No: 1 or a functional variant thereof. The invention also relates to a peptide comprising a fragment of the protein of at least six amino acids in length. A protein or peptide which is capable of generating a protective immune response to Group A streptococcus comprises the amino acid sequence of SEQ ID No: 1, a functional variant thereof or a functional variant of at least six amino acids in length of either thereof. Such a protein or peptide may be used in a vaccine composition together with a pharmaceutically acceptable carrier.		

SCANNED # 22